Release notes for the ASC-29320A-R, ASC-29320ALP-R, ASC-39320A-R
dated: July 01, 2008

This release notes contains the following:

1. Description of the release
2. Supported hardware
3. Supported Operating Systems
4. Major functional changes
5. Prerequisites of using the Software
6. Tested Configuration
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1. Description of the Release:

Date of release: July 01, 2008

This is the official software release containing the list of software components listed in the section 3 of the release note.

2. Supported Hardware:

The software release supports the following hardware listed below:

Adaptec SCSI Card 29320A-R Ultra320 PCI-X SCSI Controller
Adaptec SCSI Card 29320ALP-R Ultra320 PCI-X SCSI Controller
Adaptec SCSI Card 39320A-R Ultra320 PCI-X SCSI Controller

The operating system drivers listed also support the following hardware:

a. Adaptec SCSI Card 29320-R Ultra320 PCI-X SCSI Controller
b. Adaptec SCSI Card 39320-R Dual Channel Ultra320 PCI-X SCSI Controller
c. Adaptec SCSI Card 39320D Dual Channel Ultra320 PCI-X SCSI Controller
d. Adaptec SCSI Card 39320D-R Dual Channel Ultra320 PCI-X SCSI Controller
e. Adaptec SCSI Card 29320LP-R Ultra320 PCI-X SCSI Controller

3. Supported Operating Systems:

Windows Driver 32-bit and 64-bit (AMD & EM-64T) HostRAID - v2.0.0.212

- Windows 2008 Server, Standard, Enterprise, and x64 Edition

Note: use this driver if HostRAID is enabled in the card's BIOS.

4. Major Functional Changes:

1. Added support for Windows Server 2008

5. Prerequisites of Using the Software:

The driver should be used with the following BIOS and software versions:

Expansion ROM BIOS for 29320A-R, 29320ALP-R, 39320A-R	- v4.30.0
Adaptec Storage Manager (ASM) and HRCONF	- 5.10.0 Build 17173

6. Tested Configuration:

The software was tested with the Hardware Supported list on the motherboard with the IBM PC/AT compatible PCIe platforms. These are the various components used during the testing:

- IBM x86 PC/AT compatible platforms with Intel Xeon
- Tested with direct attached Ultra160 and Ultra320 disk drives, tape devices and enclosures

7. Known Issues/Limitations:

1. Issues have been seen with drive ordering during the installation of Windows Server 2008 when more than one bootable controller is installed in the system. Microsoft recommends having only one bootable controller active/installed during the installation of the operating system. Controllers that have the BIOS or INT13 Support disabled are not causing an issue.

2. Multi-initiator configurations are supported with Ultra160 and previous generation hard drives. Current generation Ultra320 hard drives do not support this configuration.

3. An Event 9 in the Event Viewer may occur with a DLT 7000 or 8000 tape device. If this occurs, install the registry fix (MAXIO64K.REG) located in the Windows Driver directory.

8. Windows REGISTRY PARAMETERS:

8.1 Driver Specific Registry Parameters

WARNING: Altering or adding these driver parameters incorrectly can render your system inoperable. Use them with caution.

Follow the instructions below to enter the registry values that affect the configuration information for Adaptec SCSI Card drivers. All SCSI Cards supported by the installed driver are affected by the values you enter here.

Each driver has its own "key" reference. In this example, the Ultra320 key is used (adpu320). To enter driver-specific parameters, follow these steps:

1) Select Run from the Start button.
2) Type "regedt32" and press Enter.
3) Open the registry list to the following location:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\adpu320\Parameters\Device\

If the \Parameters\Device\ keys already exist, skip to step 6 below to begin entering parameters.
If the keys do not yet exist, you will need to create them by continuing with step 4.

4) Click on the adpu320 key. Select the Add Key from the Edit menu; Type "Parameters" in the Key Name edit box. Leave the Class edit box blank.
5) Click on the Parameters key. Select the Add Key from the Edit menu; Type "Device" in the Key Name edit box. Leave the Class edit box blank. To specify a certain host adapter, append Device with the number of the host adapter. For example, type "Device0" for the first host adapter, "Device1" for the second, etc. If you omit the host adapter number, the configuration information applies to all supported host adapters.
6) Click on the Device key. Select Add Value from the Edit menu; type "DriverParameters" in the Value Name edit box. Enter the Data Type and press Enter. A String Editor text box appears.
Enter valid parameters in the text box. When entering multiple parameters, each parameter must be separated by a space. To enter additional values, repeat step 6.

Note: Changes made with the Registry Editor do not take effect until you shut down and then restart your system.

```
   ------------------------------------------------------------------
            Option: /MAXTAGS=[value]
        Definition: Specifies a tagged command queue depth per
                    target.
         Data Type: REG_SZ
   Possible Values: 1-255
     Default Value: 32
   ------------------------------------------------------------------
            Option: /INSTRUMENTATION
        Definition: Enables instrumentation support in the driver.
         Data Type: REG_SZ
   Possible Values: N/A
     Default Value: N/A
   ------------------------------------------------------------------
            Option: /INSTR_ERRLOG_Z=[value]
        Definition: Specifies the length of the instrumentation
                    error log.
         Data Type: REG_SZ
   Possible Values: 0-127
     Default Value: 32
   ------------------------------------------------------------------
            Option: /RDSTRM
        Definition: Enables read streaming to be negotiated for all
                    drives.
         Data Type: REG_SZ
```

```
   Possible Values: N/A
     Default Value: Off
   ---------------------------------------------------------------
            Option: /MAXIMUMSGLIST=[value]
        Definition: Sets the maximum transfer size for an
                    individual command. The formula is:
                    TRANSFER SIZE = PAGE_SIZE * (number of
                    elements -1)
         Data Type: REG_SZ
   Possible Values: 2-255
     Default Value: 65
   ---------------------------------------------------------------
```

8.2. Windows SCSI Driver Parameters

WARNING: Altering or adding these driver parameters incorrectly can render your system inoperable. Use them with caution.

Follow the instructions below to enter the registry values that affect how the Windows SCSI manager interprets the generic configuration information of SCSI device drivers. All SCSI Cards supported by the installed driver are affected by the values you enter here.

Follow the instructions below to enter the registry values that affect the configuration information for Adaptec SCSI Card drivers. All SCSI Cards supported by the installed driver are affected by the values you enter here.

Each driver has its own "key" reference. In this example, the Ultra320 key is used (adpu320). To enter Windows parameters, follow these steps:

1) Select Run from the start button.
2) Type "regedt32" and press Enter.
3) Open the registry list to the following location:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\
adpu320\Parameters\Device\

If the \Parameters\Device\ keys already exist, skip to step 6 below to begin entering parameters. If the keys do not yet exist, you will need to create them by continuing with step 4.

4) Click on the adpu320 key. Select the Add Key from the Edit menu; Type "Parameters" in the Key Name edit box. Leave the Class edit box blank.
5) Click on the Parameters key. Select the Add Key from the Edit menu; Type "Device" in the Key Name edit box. Leave the Class edit box blank. To specify a certain host adapter, append Device with the number of the host adapter. For example, type "Device0" for the first host adapter, "Device1" for the second, etc. If you omit the host adapter number, the configuration information applies to all supported host adapters.
6) Click on the Device key. Select Add Value from the Edit menu. In the Value Name edit box, enter one of the valid parameter values. Make sure to enter the appropriate Data Type for the value. To enter additional values, repeat step 6.

Note: Changes made with the Registry Editor do not take effect until you shut down and then restart your system.

```
   ---------------------------------------------------------------
```

```
          Option: MaximumLogicalUnit
      Definition: This command allows the user to specify how
                  many LUNs the SCSI bus scans for during system
                  initialization.
       Data Type: REG_DWORD
Possible Values: 0-8 (Windows NT 4), 0-32 (Windows 2000/XP/Server 2003)
  Default Value: 8 (Windows NT 4), 32 (Windows 2000/XP/Server 2003)
-----------------------------------------------------------------
          Option: NumberOfRequests
      Definition: Specifies the maximum number of outstanding or
                  concurrent requests that can be delivered to
                  the SCSI adapter.
       Data Type: REG_DWORD
Possible Values: 16-512
  Default Value: 255
-----------------------------------------------------------------
          Option: DisableTaggedQueuing
      Definition: If present, tells the SCSI adapter to
                  disable tagged queuing for all devices.
       Data Type: REG_DWORD
Possible Values: N/A
  Default Value: N/A
-----------------------------------------------------------------
          Option: DisableDisconnects
      Definition: If present, tells the SCSI adapter not to
                  allow any target device disconnect privileges
                  for I/O.
       Data Type: REG_DWORD
Possible Values: N/A
  Default Value: N/A
-----------------------------------------------------------------
          Option: DisableMultipleRequests
      Definition: Limits the number of commands to each logical
                  unit to one.
       Data Type: REG_DWORD
Possible Values: N/A
  Default Value: N/A
-----------------------------------------------------------------
```

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